

Application No. 10/596,000
November 22, 2010
Reply to Office Action dated June 22, 2010
Page 2 of 14

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-19 (canceled).

Claim 20 (currently amended): A method for forming a thick film pattern, comprising the steps of:

applying to a support a photosensitive paste including a conductive powder, a photosensitive monomer, a photopolymerization initiator, and a polymer, wherein a ratio of the photosensitive monomer to a total amount of the photosensitive monomer and the polymer satisfies the condition represented by the following Formula:

photosensitive monomer/(photosensitive monomer + polymer) ≥ 0.86 0.90,

so as to form a photosensitive paste film;

subjecting the photosensitive paste film to an exposure treatment; and

developing the photosensitive paste film subjected to the exposure treatment so as to form a thick film pattern; wherein

the contents of the conductive powder, the photosensitive monomer, and the photopolymerization initiator constituting the photosensitive paste are within the following ranges:

conductive powder: about 60 to about 90 percent by weight of the photosensitive paste;

photosensitive monomer: about 5 to about 39 percent by weight of the photosensitive paste; and

photopolymerization initiator: about 1 to about 10 percent by weight of the photosensitive paste.

Claim 21 (canceled).

Claim 22 (previously presented): The method for forming a thick film pattern according to Claim 20, wherein the photosensitive paste includes a photosensitive monomer having a double bond concentration within the range of about 8 mmol/g to about 11 mmol/g.

Claim 23 (previously presented): The method for forming a thick film pattern according to Claim 20, wherein the photosensitive paste includes a photosensitive monomer having an ethylene oxide structure with a degree of polymerization of about 3 or less.

Claim 24 (previously presented): The method for forming a thick film pattern according to Claim 20, wherein the photosensitive paste comprises an ultraviolet absorber.

Claim 25 (previously presented): The method for forming a thick film pattern according to Claim 20, wherein the photosensitive paste comprises a solvent in a proportion of about 5 percent by weight or less.

Claim 26 (previously presented): The method for forming a thick film pattern according to Claim 20, wherein development is conducted by using an organic solvent in the development step.

Claim 27 (previously presented): The method for forming a thick film pattern according to Claim 20, wherein the exposure treatment is conducted while the photosensitive paste film and a photomask are arranged to be kept from contacting with each other in the exposure step.

Claim 28 (previously presented): The method for forming a thick film pattern according to Claim 20, wherein the photosensitive paste is subjected to the exposure treatment without using a photomask in the exposure step.

Claim 29 (previously presented): A method for manufacturing an electronic component, comprising the steps of:

forming a thick film pattern by the method according to Claim 20; and
firing the resulting thick film pattern.

Claim 30 (canceled).

Claim 31 (currently amended): A photolithography photosensitive paste comprising:

a conductive powder;
a photosensitive monomer;
a photopolymerization initiator; and
a polymer; wherein

a ratio of the photosensitive monomer to a total amount of the photosensitive monomer and the polymer satisfies the condition represented by the following Formula:

photosensitive monomer/(photosensitive monomer + polymer) ≥ 0.86 0.90;

the contents of the conductive powder, the photosensitive monomer, and the photopolymerization initiator are within the following ranges:

conductive powder: about 60 to about 90 percent by weight of the photosensitive paste,

photosensitive monomer: about 5 to about 39 percent by weight of the photosensitive paste, and

photopolymerization initiator: about 1 to about 10 percent by weight of the

Application No. 10/596,000
November 22, 2010
Reply to Office Action dated June 22, 2010
Page 5 of 14

photosensitive paste.

Claim 32 (canceled).

Claim 33 (previously presented): The photolithography photosensitive paste according to Claim 31, wherein the photosensitive monomer is a photosensitive monomer having a double bond concentration within the range of about 8 mmol/g to about 11 mmol/g.

Claim 34 (previously presented): The photolithography photosensitive paste according to Claim 31, wherein the photosensitive monomer is a photosensitive monomer having an ethylene oxide structure with a degree of polymerization of about 3 or less.

Claim 35 (previously presented): The photolithography photosensitive paste according to Claim 31, further comprising an ultraviolet absorber.

Claim 36 (previously presented): The photolithography photosensitive paste according to Claim 31, further comprising a solvent in a proportion of about 5 percent by weight or less.

Claim 37 (new): The photolithography photosensitive paste according to Claim 20, wherein, the photosensitive monomer has a double bond concentration within a range of about 7.01 mmol/g to about 10.38 mmol/g and the conductive powder is substantially not provided with an inorganic powder coating.

Claim 38 (new): The photolithography photosensitive paste according to Claim 31, wherein, the photosensitive monomer has a double bond concentration within a

Application No. 10/596,000

November 22, 2010

Reply to Office Action dated June 22, 2010

Page 6 of 14

range of about 7.01 mmol/g to about 10.38 mmol/g and the conductive powder is substantially not provided with an inorganic powder coating.